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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,474	02/09/2005	Shoichiro Taira	05028/HG	6854

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EXAMINER	
ZIMMERMAN, JOHN J	
ART UNIT	**PAPER NUMBER**
1775	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/521,474	Applicant(s) TAIRA ET AL.	
	Examiner John J. Zimmerman	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *21-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1/18/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20050118, 20070208*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

FIRST OFFICE ACTION

Election/Restrictions

1. Applicant's correspondence titled "RESPONSE TO RESTRICTION REQUIREMENT" was received January 18, 2007. Applicant's election of Group I (claims 1-20) is noted. No traverse of the restriction requirement was indicated in applicant's response and therefore the election is considered an election *without* traverse. Claims 21-28 have bee withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Priority

2. Acknowledgement is made of a claim for foreign priority under 35 U.S.C. 119(a)-(d) or (f). A copy of the certified copy of the priority document has been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

Information Disclosure Statement

3. The information disclosure statement received January 18, 2005 has been considered with the exception of Japanese document JP 2001-232358. This document may be cited in error as it does not appear to be relevant to the claimed subject matter in the pending application. The information disclosure statement received February 8, 2007 has been considered. Several

documents are duplicate entries of those considered in the prior information disclosure statement. Duplicate entries have been crossed through.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Toki (Japanese Publication 2000-160358).

7. Toki discloses hot-dipped galvanized steel sheet. Toki may not disclose that the plating layer consists essentially of a η phase, but since Toki's inclusion of aluminum in the zinc plating layer is very low (e.g. see paragraph [0029]), the η phase should be present (e.g. see applicant's specification at page 13, first full paragraph). Toki may not describe the oxide layer thickness

and composition in the same terminology as that claimed, but Toki exposes the plating layer to an acidic solution (e.g. see paragraphs [0035], [0043]) in the same manner as applicant and therefore the resultant oxide layer thicknesses and compositions would be expected to be the same or to be substantially the same as those claimed by applicant (e.g. see applicant's specification at page 19, bottom paragraph, to page 20, middle paragraph). Toki may not describe the oxide layer as having microirregularities with a network structure including convexities and discontinuous concavities surrounded by convexities and may not disclose the mean spacing relative to the Ra of the layer, but the immersion of the sheet in an acidic solution (e.g. pH of 2-4) containing Fe ions (e.g. 10-100 g/l) for 1-30 seconds (e.g. paragraphs [0035], [0043]) should produce this structure or substantially the same structure (e.g. see applicant's specification on page 26, first full paragraph, to page 27, top paragraph). In addition, the Fe content ratio of the Zn-base oxide layer should also be the same or substantially the same. Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977). See MPEP 2112.

8. Claims 1-2, 4-6, 8-11, 13 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hashimoto (Japanese Publication 10-20460).

9. Hashimoto discloses hot-dipped galvanized steel sheet. Hashimoto discloses that the plating layer is of a η phase (e.g. [0023]) and Hashimoto's inclusion of aluminum in the zinc plating layer is very low (e.g. see paragraph [0028]) and therefore the η phase would be expected to be present. The plating has convexities and concavities (e.g. see paragraph [0009]) and the oxide thickness is up to 40 nm (e.g. see paragraph [0008]). The sheet is temper rolled (e.g. paragraph [0028]). The Fe content of the plating is 7-20 wt.% (e.g. paragraph [0012]) with specific examples in the tables. Hashimoto may not describe the oxide layer composition in the same terminology as that claimed, but Hashimoto does disclose that the aluminum oxide to zinc oxide ratio exceeds 0.85 in part and is below 0.85 in a part, with the ratio regulated to 0.05-1.5, and also that the average concentration of aluminum oxide and zinc oxide are regulated to 5-50 mol% and 15-95 mol%, respectively, (e.g. see claims 1-4 with specific examples in the tables). Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior

art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977). See MPEP 2112.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art of record serves to further establish the level of ordinary skill in the art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
March 17, 2007